US Army Corps of Engineers ®
Nashville District

Old Hickory Lake
Lake Casts

Spring/Summer 2012

OLD HICKORY LAKE CELEBRATES ITS 60TH "BREAKING GROUND" ANNIVERSARY

The Old Hickory Lock and Dam, located on the Cumberland River at Mile 216.2 in Sumner and Davidson Counties, Tennessee, approximately 25 miles upstream from Nashville, impounds Old Hickory Lake. Old Hickory Lake is a mainstream run-of-the-river impoundment. The reservoir contains 22,500 surface acres at an elevation of 445 feet (above sea level) and extends 97.3 river miles. During normal operations, water level fluctuations are minimal with a minimum pool elevation of 442 feet and a "full pool" elevation of 445 feet.

Old Hickory Lock and Dam was authorized for construction by the Rivers and Harbors Act of 1946 as a unit of a comprehensive development plan for the Cumberland River Basin. Construction started in January 1952 and the project was completed for full use in December 1957. Under the Rivers and Harbors Act of 1946, Old Hickory Lock and Dam was authorized for power generation and navigation.

Power from Old Hickory Lake, or hydropower, is generated as water from the reservoir enters gate-controlled intakes into the powerhouse, rotates the turbines, and discharges through draft tubes into the river below the dam. Generators, mounted on the shafts with the turbines, produce electric current. It is increased in voltage by transformers and carried from the power plant by transmission lines leading from the switchyard. In 2011, Old Hickory Lock and Dam generated approximately 548 billion kilo-watts of power.

Historically, navigation along the Cumberland River was extremely important to the livelihood of many people. Prior to the construction of the Old Hickory Lock and Dam, Locks 3, 4, 5, 6, and 7 were operated on the Cumberland River on what is now part of Old Hickory Lake. Locks 3 and 4 were located in Sumner County, Lock 5 in Wilson County, Lock 6 in Trousdale County, and Lock 7 in Smith County. These five locks allowed a variety of materials to be transported downstream and upstream. These items included animals and animal products, produce and grocery items, textiles, tobacco, wood and paper, nonmetallic minerals (such as coal, bricks, gravel, sand, cement, lime, and gasoline), machinery, and chemicals. In 1920, these five locks totaled 1,557 lockages carrying 140,830 tons of materials valuing $9,364,160.00. The existing Old Hickory Lock continues to be extremely important to commercial transportation with 2,497 total locakges in 2011 carrying around 5 million tons of commercial materials. The majority of materials now being carried aboard barges passing through the lock are items such as sand, gravel, and coal.

(Above) Lock 5, Wilson County, TN May 30, 1940.

Despite the fact that recreation was not an authorized purpose for this project; the 440 miles of shoreline at full pool, fairly constant water level maintained under normal operating conditions, and proximity to Nashville has consistently made Old Hickory Lake one of the top ranked lakes in the Great Lakes and Ohio River Division for recreational visitors.

The Old Hickory Lock, Dam, Powerhouse and Lake are operated and supervised by the U.S. Army Corps of Engineers personnel under the direction of the District Engineer at Nashville. To learn more about the history of Old Hickory Lock and Dam, please visit http://www.lrn.usace.army.mil/op/old/rec/.

BEAVER DAMAGE

If you own land adjacent to Old Hickory Lake, it is likely you will encounter a beaver or evidence of one at some point. Beavers, once considered a valuable economic resource for their fur, are no longer being trapped in significant numbers. The result has been an increase in beaver population around watersheds throughout the United States. The main diet of the beaver consists of tree bark and cambium (soft tissue that grows under the bark of trees). So, with the current swell in beaver population, more and more adjacent landowners are seeing beaver damaged trees. If you are a landowner being affected by beaver damage, there are a couple of actions you can take to help protect trees.

The first control method (and most environmentally friendly method) is to install a "tree fence" around the trees being targeted. These guards should be constructed of galvanized welded wire (2" by 2" up to 2" by 4"), which is widely available at local hardware or home improvement stores. Avoid using smaller chicken wire which is not as strong and may not provide adequate protection. Cut a length of wire long enough to wrap around the tree, and leave a 6" gap between the tree trunk and wire. A good height for the fence is approximately 36". Attach the ends of the cylinder together with fasteners such as wire or zip ties. These "tree fences" can float, so there is no need to anchor them to the ground.

The "Paint and Sand" method, although less popular, is another way to help control beaver damage. For this method, one gallon of latex paint (matched to the color of the tree trunk it will be applied upon) is combined with 20 ounces of 30 -70 millimeter sand. The mixture is applied around the tree trunk up to a height of approximately 36". The abrasiveness has shown some success in deterring beavers from chewing these trees.

If you live near a watershed, it is inevitable that you will encounter beaver damage. While it may be near impossible to remove all risks of damage, these techniques will certainly help keep your trees safe and healthy. If you are an adjacent landowner on Old Hickory Lake and have questions concerning beaver damage, contact the Old Hickory Lake Resource Manager's Office at (615) 822-4846.

OLD HICKORY LAKE TRAILS

There are many ways to enjoy the arrival of spring and summer on Old Hickory Lake. Many people choose to enjoy the water by boating and fishing on the lake; however, there are several trails tucked into the neighborhoods surrounding Old Hickory Lake that provide plenty of opportunities to enjoy the land around the lake as well.

On Walton Ferry Road in Hendersonville, there is an area known as the Environmental Study Area or ESA. The ESA provides many different sources of enjoying nature. There are wildlife food plots, a butterfly garden, and over seventy-five different species of trees and shrubs. The winding educational trail that leads through the ESA is bordered by trees and shrubs that are identified by id plates. The trail ends at a shelter that can be used for a picnic or just to enjoy nature.

On the left bank in Old Hickory, there is a nature trail below the dam. The trail is over a mile long with beautiful board walks and access to a secluded pond. This nature trail is a designated component of the National Trails System and is a great place to enjoy natural surroundings and some time away from the city.

For those interested in biking, there are two mountain bike trails, one located on the left bank and one located on the right bank of the lake. The mountain bike trail located at Lock 4 Park in Gallatin, is a simple 8.5 mile, single track trail. Shutes Branch mountain bike trail is located in Mt. Juliet at the former Shutes Branch campground. It is another single track trail that is comprised of more than eight miles of varying landscapes among trees and rock gardens. Many walkers frequent these trails, so mountain bikers are advised to be on the lookout.

Spring is here and summer is coming so come take a walk or ride a bike on our trails and take advantage of the educational experience and beautiful scenery you will encounter.

OLD HICKORY LAKE GREENHOUSE PROJECT

The Old Hickory Lake Staff is excited to announce that we will be continuing our greenhouse initiative. Through our greenhouse program, we provide adjacent property owners with native plants to be used on public land. This year there will be a wide variety of natives to choose from. There will be shrubs such as strawberry bush and black chokeberry, small flowering trees such as red buds and flowering

dogwoods, and hardwoods like red oaks, as well as our state tree, the tulip poplar. This service is used to promote shoreline stabilization and improve water quality and wildlife habitat.

As adjacent property owners on Old Hickory Lake, you have surely seen the effects of shoreline degradation. Some examples of this are: construction that leads to higher storm water runoff, clearing of vegetation leading to loss of wildlife habitat, and wind and wave action that leads to shoreline damage.

Planting native, deep-rooted plants can actually limit these effects as well as help reverse the process all together. Native plants can be used to filter particulates in storm water to enhance water quality while at the same time using their root systems to stabilize the shoreline and provide excellent, natural erosion control. When keeping wildlife in mind, native shrubs can provide great nesting habitat, as well as escape from predators, while minimizing interference with the home owner's view of the lake. Native plants provided by the Resource Manager's Office are a great way to not only help meet the planting requirements in our permit conditions, but to preserve our natural resources, improve water quality, and enhance beautification around the lake. For a full list of native plants provided, contact Old Hickory Lake Resource Manager's Office at (615) 822-4846.

IS YOUR JET SKI LIFT APPROVED?

The 2012 summer recreation season is right around the corner - the time of year when skiing, tubing and all other water-related activities are in full force, including the opportunity to ride your Personal Water Craft or jet ski.

The Old Hickory Lake Resource Manager's Office would like to remind you that if you are planning on adding a jet ski lift to your dock, please make sure to contact your ranger for a revision application before installing or modifying your dock. Remember, the maximum square footage for a slip dock, including moored boats and attachments, is 700 square feet and 160 square feet for a platform dock (280 square feet with attachments). Jet ski lifts or any other attachments to your dock are included in the square footage. All plans for dock revisions must be approved prior to any changes or modifications being made.

Being proactive and taking the opportunity to send in a dock revision application in order to receive approval for any changes you wish to make can save you not only time and headache, but money as well. If you have any questions or would like to request a revision application, you can reach your respective ranger at (615) 822-4846.

REEL IN AND RECYCLE

Did you know that it takes over 500 years for monofilament fishing line to decompose? Meanwhile, that discarded line can tangle itself around fish and wildlife causing harm or get caught around your boat prop causing damage. The Corps of Engineers has installed six monofilament recycling stations on Old Hickory Lake located at Avondale, Station Camp, Bull Creek, Laguardo, Davis Corner, and Shutes Branch boat ramps. Please place unwanted monofilament line in one of these bins so that it can be recycled and help keep our waters tangle free.

WATER SAFETY TIP - BEWARE OF HAZARDOUS AREAS

The area around Old Hickory Dam can be hazardous at certain times with turbulent water and swift currents that can endanger people and boaters. Below the dam, water is subject to sudden rise and turbulence. The water conditions can change quickly due to operation of the generators, lock discharge, or spillway gates. It is particularly important to be out of hazardous areas when the horns or sirens sound and the lights flash, as water is about to be released due to one of these operations. On the upstream side, boats should keep back 150' from the dam. Swimming or wading around the dam is not permitted. Please exercise caution when using areas around the dam and be mindful of all warning signs. Your cooperation in this safety effort is appreciated.

Resource Managers Office
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MEET THE RESOURCE MANAGER AND PARK RANGER STAFF

Resource Manager - **Freddie Bell**
Conservation Biologist - **Crystal Tingle**
Environmental Protection Specialist - **Charlie Leath**

***If you live on the south side of Old Hickory Lake, your ranger may have changed. Please take the time to find out which ranger is responsible for the area you live in.**

Area 1 (Briley Parkway Bridge below the Dam to Bahia Mar Point in Hendersonville) - **Kathryn Wall**

Area 2 (Bayshore Court to Bay Point Subdivision in Gallatin) - **Noel Smith**

Area 3 (Bay Point Subdivision to the Smith County Line) - **John Baird**

*Area 4 (Smith County line on the south side of the lake to the Hwy 109 Bridge) **- Amy Redmond**

*Area 5 (Hwy 109 Bridge to Trails End Subdivision/ Lindsley Bend) - **Allen Earhart**

*Area 6 (Trails End Subdivision to Briley Parkway Bridge below the Dam) **- Trey Church**

Park Ranger Cody Britton joined the staff from Lake Barkley in January 2012. Cody graduated from Tennessee Tech University with a degree in Fisheries Science.

Park Ranger Courtney Eason joined the staff in June 2010. She graduated in December 2011 with a degree in Agriculture from Tennessee State University.

If you have any questions, please contact this office at (615) 822-4846 or (615) 847-2395.

OLD HICKORY LAKE FACEBOOK PAGE

Old Hickory Lake now has a Facebook page that will be updated with information on upcoming events, pictures, and safety tips throughout the year. Visit us at http://www.facebook.com/#!/oldhickorylake and be sure to LIKE us!